Check Your Understanding
Unit 1, Concept 1

Name _____ Date _____

Lesson 1: The Journey Begins

Instructions

Please answer each question carefully.

1. In 890,341 the digit 9 is in the _____ place.

2. In 230,167 the digit 0 is in the _____ place.

3. In 34.09 the value of the 9 is _____.

4. In 7,000,342,101 the value of the 7 is _____.

5. Write the following number in the place value chart: 7 milliard, 9 hundred million, 2 hundred 4 thousand, sixty, and 8 tenths.

Milliards	Millions			Thousands			Ones			•	Decimals	
O	H	T	O	H	T	O	H	T	O	•	Tenths	Hundredths
										•		

Challenge: Use the clues to figure out the number.

- It is a 5-digit number.
- The largest digit is in the Hundredths place.
- The value of the digit in the Tens place is thirty.
- The digit in the Tenths place is less than 1.
- The digit in the Hundredths place is equal to the digit in the Tens place multiplied by 2.
- The value of the Hundreds place is 20 Tens.
- The digit in the Ones place is one more than the digit in the Tens place.

Milliards	Millions			Thousands			Ones			•	Decimals	
O	H	T	O	H	T	O	H	T	O	•	Tenths	Hundredths
										•		

Learning for the future

Check Your Understanding
Unit 1, Concept 1

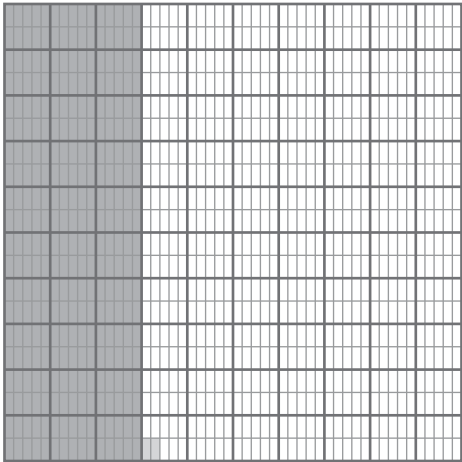**Name** _____   **Date** _____

Lesson 2: Decimals to the Thousandths Place

Instructions

Please answer each question carefully.

1. Write the following number in the place value chart: thirty-four and one hundred six thousandths.

Milliards	Millions			Thousands			Ones			•	Decimals		
O	H	T	O	H	T	O	H	T	O	•	Tenths	Hundredths	Thousandths
										•			

2. Pick the correct decimal for the model shown.

   0.31   3.02   0.302 $\frac{3}{10}$

Check Your Understanding
Unit 1, Concept 1

Name _____ Date _____

Lesson 2: Decimals to the Thousandths Place *(continued)*

3. Record 1.372 on the place value chart.

Milliards	Millions			Thousands			Ones			•	Decimals		
O	H	T	O	H	T	O	H	T	O	•	Tenths	Hundredths	Thousandths
										•			

4. Record 0.091 on the place value chart.

Milliards	Millions			Thousands			Ones			•	Decimals		
O	H	T	O	H	T	O	H	T	O	•	Tenths	Hundredths	Thousandths
										•			

Record 3 and 542/1000 on the place value chart.

5.

Milliards	Millions			Thousands			Ones			•	Decimals		
O	H	T	O	H	T	O	H	T	O	•	Tenths	Hundredths	Thousandths
										•			

Learning for
the future

Check Your Understanding
Unit 1, Concept 1

Name _____ **Date** _____

Lesson 3: Place Value Shuffle

Instructions

Please answer each question carefully.

1. The digit 5 started in the Hundredths place and moved one place to the left.

   Original value: _____ New value: _____

2. The digit 7 started in the Hundreds place and moved one place to the right:

   Original value: _____ New value: _____

3. Hala is learning to be a cartographer (map maker) and draws a map of the Fayoum Oasis. Each centimeter on her map represents 36 kilometers. If she draws a road that is 10 centimeters long, how many kilometers will that represent?

   _____

4. A cartographer drew a local hiking trail on his map. The length of the trail was 4,000 meters. If each centimeter represents 100 meters on his map, how many centimeters long will the cartographer make the trail on his map?

   _____

5. How does understanding place value help you solve problems 3 and 4?

   _____

Learning for
the future

Check Your Understanding
Unit 1, Concept 1

Name _____   **Date** _____

Lesson 3: Place Value Shuffle *(continued)*

6. Mohab filled in the place value chart for 63.45 x 100. What is his error?

Thousands	Ones			•	Decimals	
O	H	T	O	•	Tenths	Hundredths
		6	3	•	4	5
	6	3	4	•	5	

_____

_____

Learning for the future

Check Your Understanding
Unit 1, Concept 1

Name _____   **Date** _____

Lesson 4: Composing and Decomposing Decimals

Instructions

Please answer each question carefully.

Use expanded form and two other strategies to decompose each number.

1. 30.080

_____

_____

2. 409.008

_____

_____

Rewrite the numbers in standard form.

3. 9,000 + 700 + 10 + 0.04 + 0.008

_____

_____

4. 7,000 + 800 + 3 + 0.1 + 0.06

_____

_____

Challenge: Choose three of the answers that have the same value as 345.51.

345.51

    A. 300 + 40 + 5 + 0.5 + 0.01   **D.** 345 + 0.25 + 0.51

    B. 305 + 40 + 0.51   **E.** 200 + 145 + 0.5 + 0.01

    C. 340 + 50 + 0.500 + 0.10

Check Your Understanding
Unit 1, Concept 1

Name _____ **Date** _____

Lesson 5: Comparing Decimals

Instructions
Please answer each question carefully.

Write the decimals in the place value chart. Then, compare them using greater than (>), less than (<), or equal to (=).

1. 40.11 _____ 40.110

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

2. 63.024 _____ 64.0

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

3. 90.919 _____ 91.0

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

4. Order these numbers from greatest to least:

3.401   2.351   3.034   2.892   3.041   2.89   2.359   3.10

Check Your Understanding
Unit 1, Concept 1

Name _____ **Date** _____

Lesson 6: Rounding Decimals

Instructions

Please answer each question carefully.

Follow the directions to solve the decimal rounding problems.

1. Choose two decimals that round to 9.4.

9.39   9.25   9.42   9.32   9.48   9.45

2. Choose three decimals that round to 7.65.

7.638   7.648   7.652   7.691   7.645   7.644

3. Fill in the chart as you round each decimal to the stated place value.

Number	Round to the nearest whole number	Round to the nearest Tenth	Round to the nearest Hundredth
12.285			
6.507			
145.009			

Learning for the future

Check Your Understanding
Unit 1, Concept 2

Name _____   **Date** _____

Lesson 7: Estimating Decimal Sums

Instructions
Please answer each question carefully.

1. Estimate the sum by rounding to the largest place value in each number.

   12.03 + 5.02

   _____

2. Estimate the sum of 2.41 and 7.28 by rounding to the nearest Tenth.

   _____

3. Estimate the sum by rounding to the largest place value with a digit larger than 0 in each number.

   0.071 + 3.02

   _____

4. Estimate the sum of 0.34 and 1.89 using an estimation strategy of your choice.

   _____

Check Your Understanding
Unit 1, Concept 2

Name _____   **Date** _____

Lesson 8: Modeling Decimal Addition

Instructions

Please answer each question carefully.

1. Write an equation to match the decimal model, and then solve.

_____ + _____ = _____
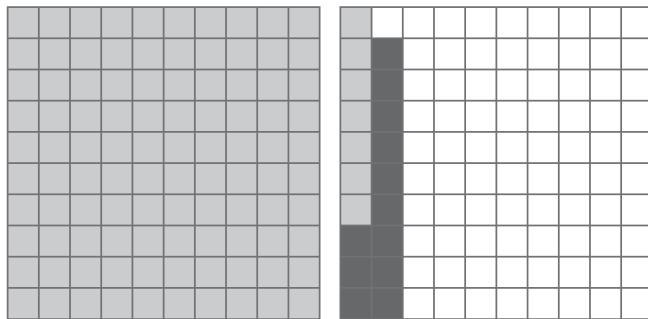
2. Use two colors to create a model to match the equation:

$$0.27 + 0.45 = \underline{\hspace{2cm}}$$
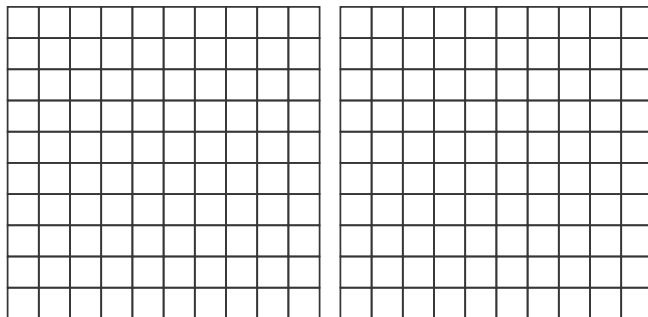
Check Your Understanding
Unit 1, Concept 2

Name _____   **Date** _____

Lesson 8: Modeling Decimal Addition *(continued)*

3. Solve: 0.27 + 0.45 = _____

4. Use two colors to create a model for the equation:

1.06 + 0.98 = _____
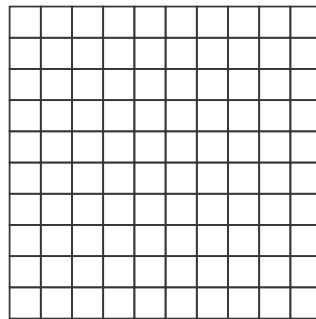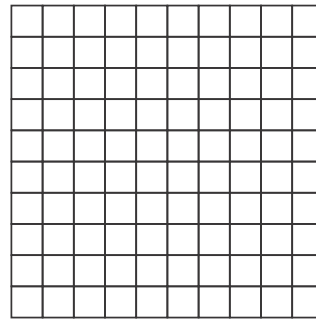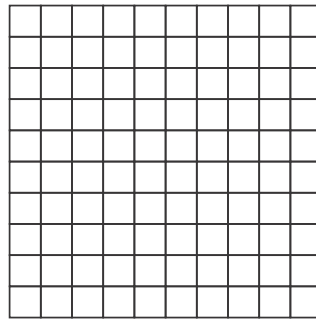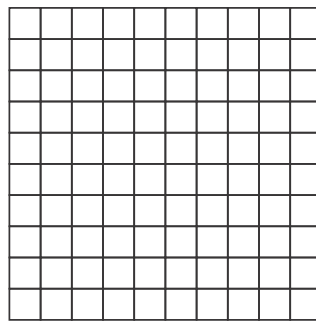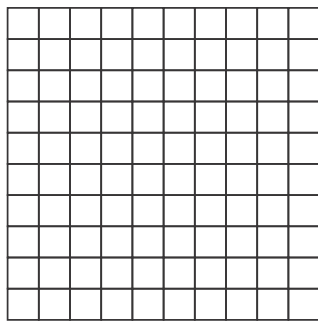
Check Your Understanding
Unit 1, Concept 2

Name _____   **Date** _____

Lesson 8: Modeling Decimal Addition *(continued)*

5. Solve: 1.06 + 0.98 = _____

6. Use two colors to create a model for the equation:

1.23 + 2.05 = _____
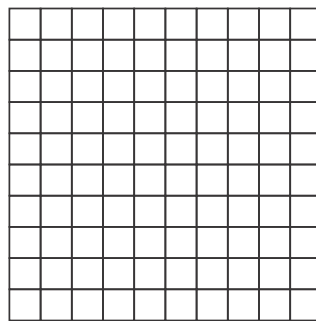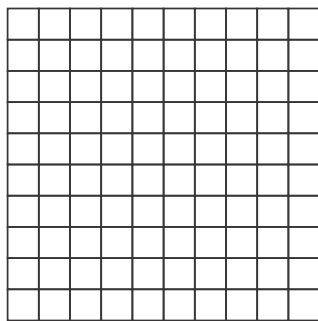
7. Solve: 1.23 + 2.05 = _____

Check Your Understanding
Unit 1, Concept 2

Name _____ **Date** _____

Lesson 9: Thinking Like a Mathematician

Instructions
Please answer each question carefully.

1. How many decimal places will be in the sum? 9.247 + 4.3 = _____

    A. three decimal places

    B. four decimal places

    C. five decimal places

    D. six decimal places

2. 9.247 + 4.3 = _____

3. Choose the highest estimate for 13.7 + 27.58 = _____.

    45.5   39   41.3   43.5

4. 13.7 + 27.58 = _____

5. Tarek and Ola both rounded to estimate the sum of 7.125 + 9.58. Tarek
    rounded the decimals to 7 + 10. Ola rounded the decimals to 7.1 + 9.6.

    5a. Which student will have an answer that is closer to the actual sum?

    _____

    5b. Why?

    _____

    _____

Learning for
the future

Check Your Understanding
Unit 1, Concept 2

Name _____ **Date** _____

Lesson 10: Subtracting Decimals

Instructions

Please answer each question carefully.

Use the place value charts to help you solve the equations.

1. 2.31 – 1.9 = _____

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

2. 2.02 – 1.03 = _____

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

3. 1.21 – 1.09 = _____

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

Learning for the future

Check Your Understanding
Unit 1, Concept 2

Name _____ **Date** _____

Lesson 10: Subtracting Decimals *(continued)*

4. 3.40 – 2.87 = _____

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

5. 3.01 – 2.91 = _____

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths
				•			
				•			

Learning for the future

Check Your Understanding
Unit 1, Concept 2

Name _____   **Date** _____

Lesson 11: Estimating Decimal Differences

Instructions
Please answer each question carefully.

For each problem, round the numbers to the greatest place value. Then, find the estimated difference and the exact difference.

1. 9.02 – 8.91

estimate: _____   exact: _____

2. 3.99 – 2.50

estimate: _____   exact: _____

Round the numbers to the nearest Tenth. Find the estimated difference and the exact difference.

3. 2.34 – 1.24

estimate: _____   exact: _____

4. 12.45 – 10.01

estimate: _____   exact: _____

5. Round the numbers to the nearest Hundredth. Find the estimated difference and the exact difference.

6. 2.445 – 1.229

estimate: _____   exact: _____

Learning for
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Check Your Understanding
Unit 1, Concept 2

Name _____ **Date** _____

Lesson 12: Subtracting to the Thousandths Place

Instructions
Please answer each question carefully.

1. Amir estimated 35.67 – 18.125 to be about 20. Which of the following strategies do you think he used?

   A. He rounded each number to the Tenths place and then rounded the difference to the Ones place.

   B. He rounded each number to the Ones place and then subtracted.

   C. He rounded each number to the Tens place and then subtracted.

   D. He rounded each number to the Ones place and then added.

2. Solve: 35.67 – 18.125. = _____

3. To estimate the difference for 23.69 – 8.247, Ashraf rounded each decimal to the nearest Tenth and subtracted. What would be his estimated difference?

   _____

4. Which of the following would be a reason to estimate a sum or difference before solving?

   A. to practice adding and subtracting

   B. to practice rounding skills

   C. to determine if the answer is reasonable

   D. to determine which strategy should be used

5. Solve: 230.7 – 45.46 = _____.

Check Your Understanding
Unit 1, Concept 2

Name _____ **Date** _____

Lesson 13: Bridges and Fish: Decimal Story Problems

Instructions
Please answer each question carefully.

Solve the problems. Check the reasonableness of your answers and label your units.

1. Fares bought 9.8 kilograms of apples and 4.6 kilograms of figs. What is the weight of his fruit all together?

   _____

2. Raina was making dinner for herself and her mom. She wanted each of them to have about 170.50 grams of fish. Including her, how many grams of fish should she buy?

   _____

3. The Nile River has a maximum width of 2,800 meters. If the Tahya Misr Bridge is 67.3 meters wide, what is the difference between the two widths?

   _____

4. Badr caught 11.33 kilograms of tilapia fishing in the Nile. If he ate 6.275 kilograms and gave his neighbor 2.5 kilograms, how many kilograms of tilapia does he have left?

   _____

5. Ameen rode his bike along the Tahya Misr Bridge. It was hot outside, so he filled up two 2-liter bottles of water. He drank 2.56 liters of water during his ride. How many liters of water does he have left after the ride is over?

   _____

Check Your Understanding
Unit 2, Concept 1

Name _____   **Date** _____

Lesson 1: Expressions, Equations, and Variables

Instructions

Please answer each question carefully.

Solve the problems.

1. Nabil hiked Jebel Katerina (2.64 kilometers). He hiked 1.75 km before
    stopping for lunch. What equation represents how much farther he
    climbed after lunch to reach the summit? Choose *two* correct answers.

    A. $2.64 + 1.75 = D$

    B. $2.64 - 1.75 = D$

    C. $1.75 + D = 2.64$

    D. $1.75 - D = 2.64$

2. What is the value of D in Problem 1? Include the units in your answer.

    _____

3. What is the value of x in the equation $3.005 + 2.5 = x + 3.5$?

    A. $x = 2.005$

    B. $x = 5.505$

    C. $x = 2.5$

    D. $x = 5.5$

4. Maha took 4 bottles of water on her hike. Two of the water bottles held
    1.5 liters each. The other two held 0.75 L each. Which expression
    represents the scenario?

    A. $1.5 + 1.5 + 0.75 + 0.75$

    B. $1.5 + 0.75$

    C. $1.5 + 0.75 + 0.75$

    D. $1.5 + 1.5 + 0.75$

Name _____   **Date** _____

Lesson 1: Expressions, Equations, and Variables *(continued)*

5. Which of the following statements are true?

    A. An expression does not include variables, just numbers.

    B. An equation includes an equal sign with both sides of the equal sign representing the same value.

    C. An equation always has a variable.

    D. An expression includes an equal sign and just numbers on both sides.

Check Your Understanding
Unit 2, Concept 1

Name _____   **Date** _____

Lesson 2: Variables in Equations

Instructions
Please answer each question carefully.

Solve the problems.

1. $6.2 + p = 12.01$

_____

2. $c - 78.2 = 43.1$

_____

3. $v + 0.25 = 1.35$

_____

4. $5.35 + g = 5.91$

_____

5. $1.34 + 0.34 = 0.42 + k$

_____

Check Your Understanding
Unit 2, Concept 1

Name _____   **Date** _____

Lesson 3: Finding the Unknown

Instructions
Please answer each question carefully.

Solve the problems.

1. $10.242 + g = 20.143$

   _____

2. $y - 3.95 = 7.149$

   _____

3. $0.352 + z = 10.535$

   _____

4. $5.035 + 2.4 = 6.04 + d$

   _____

5. Write an equation for this story problem: Ezz is recording the growth of his house plant. In the month of June, it was 10.43 centimeters. He was away for the month of July. In August, when he returned, it was 16.30 cm. How much did the plant grow in July?

   _____

Check Your Understanding
Unit 2, Concept 1

Name _____ **Date** _____

Lesson 4: Telling Stories with Numbers

Instructions
Please answer each question carefully.

1. Draw a line from the story problem to the equation that could be written to represent it.

   A. A thirsty camel can drink around 113.562 liters in 15 minutes. If you only have 95.3 L of water available, how much more water do you need for a thirsty camel?

   1. $113.562 - 56.7 = x$

   B. How many liters of water would you need for two thirsty camels?

   2. $113.562 + 113.562 = x$

   C. A baby camel will drink about 56.7 liters of water. How much less water is this than what an adult camel can drink?

   3. $95.3 + x = 113.562$

2. Solve C from Problem 1.

   _____

3. Solve for x: $12.75 - x = 4.8$

   _____

4. Which story problem could be represented by the equation $12.75 - x = 4.8$?

   A. Shorouk needs water to give to her camels. She has 12.75 liters and her brother brings her another 4.8 L. How much water does she have for the camels?

   B. Rami needs 4.8 centimeters of string for a project. His mother gives him a longer piece that is 12.75 cm. How much string does Rami need to cut off to have the correct length for his project?

   C. Wagdy is building a fence. The length of the fence is 12.75 meters and the width is 4.8 m. How many meters of fencing will he need?

Concept Check-In
Unit 2 Concept 1

Name _____   **Date** _____

Concept 1: Expressions, Equations, and the Real World

Instructions
Please answer each question carefully.

1. Read the mathematical phrases. Sort them by placing each phrase from the answer bank into the table below.

Answer Bank		
A pear weighs 0.178 kilograms, and an apple weighs 0.215 kg.	$34 + 1.7 + m$	$15.76 - x = 3.24$
$2.4 + 3.6 + 9.1$	$17.2 + 8.01 = 25.21$	The blue ribbon measures 12.5 centimeters, and the pink ribbon measures 7.6 cm.

Equations	Expressions	Neither

Name _____   **Date** _____

2. The equation $5.27 + x = 21.08$ represents the sum of the weights of two fruits. Which statement is true?

    A. The equation must contain a letter because the weight of one fruit is unknown.

    B. The letter in the equation is not necessary because the weights of both fruits are known.

    C. The equation must contain a letter because the sum of the weights of the fruits is unknown.

    D. The letter in the equation is not necessary because the sum of the weights of the fruits is known.

3. Wafaa is learning about Mount Al-Nabi Shu'ayb and Mount Al-Sham. She knows that Mount Al-Nabi Shu'ayb is 3.76 kilometers high and the sum of their heights is 6.795 km. Which equations could Wafaa solve to find the height, in km, of Mount Al-Sham? Select the *two* correct answers.

    A. $3.76 + 6.795 = x$

    B. $6.795 - x = 3.76$

    C. $x + 3.76 = 6.795$

    D. $x - 3.76 = 6.795$

    E. $x + 6.795 = 3.76$

4. At a weather station in the Nile Valley, the warmest recorded temperature last year was 38°C. The coldest temperature recorded at the weather station last year was 15°C. Ezz used this information to write the equation $38 - 15 = x$. What does x represent in the equation?

    A. the average temperature at the weather station last year

    B. the lowest temperature recorded at the weather station last year

    C. the difference between the highest and lowest recorded temperatures at the weather station

    D. the sum of the highest and lowest recorded temperatures at the weather station

8

Concept Check-In
Unit 2 Concept 1

Name _____   **Date** _____

5. Samir is traveling from Aswan to Luxor. The total distance he will travel is 239.1 kilometers. He has traveled 104.7 km so far. The equation $m + 104.7 = 239.1$ models this situation, where m is the distance Samir has left to travel. How many km does Samir have left to travel?

_____

6. The average rainfall in Alexandria, Egypt, in January is 5.1 centimeters. The total average rainfall in January and February is 7.9 cm. This is modeled by the equation $x + 5.1 = 7.9$. Dalia plans to solve the equation by subtracting 5.1 from 7.9. Which statement is true?

    A. Dalia's strategy is correct, and the average rainfall in February is 13 cm.

    B. Dalia's strategy is correct, and the average rainfall in February is 2.8 cm.

    C. Dalia's strategy is incorrect, and the average rainfall in February is 13 cm.

    D. Dalia's strategy is incorrect, and the average rainfall in February is 2.8 cm.

Concept Check-In
Unit 2 Concept 1

Name _____ **Date** _____

7. Select the correct answers to complete the sentence.

   Fatma walked a total of 5.5 kilometers during her time at Wadi El-Rayan National Park. She walked 2.731 km at the park before stopping to take a photo of the lake.

   Solving the equation _____ reveals that Fatma

$2.731 + 5.5 = x$
$x - 5.5 = 2.731$
$2.731 + x = 5.5$

   walked _____ km after stopping to

2.769
3.231
8.231

   photograph the lake.

8. What is the value of x in the equation $x - 0.825 = 12.5$?

   _____

9. Maisa went to the market and bought 2.83 kilograms of mangoes and pears. She bought 1.64 kg of mangoes. Complete the equation that can be solved to find how many kg of pears, p, she bought.

   _____ = _____

$2.83 + p$
$2.83 - p$
$p - 2.83$

1.64
2.83

Name _____   **Date** _____

10. Dalia walked 4.24 kilometers at Wadi El Rayan National Park and 1.59 km at Wadi Hitan National Park. How many km did she walk in all?

    A. 2.65

    B. 3.75

    C. 5.73

    D. 5.83

11. Aya, Ganat, and Omnia were given three different equations. Each student correctly wrote a story problem that could be answered by solving for the variable in their equation.

Aya's Story Problem	Ganat's Story Problem	Omnia's Story Problem
Yesterday, I had 312.89 gigabytes of files on my computer. After deleting 125.16 GB of files today, how many GB of files remain on my computer?	Yesterday, I had 312.89 gigabytes of free space on my computer. If I delete 125.16 GB of files today, how many total GB of free space will be available now?	Yesterday, I had 312.89 gigabytes of free space on my computer. After deleting some files today, I had twice as much free space. How many total GB of free space are available now?

Match each student to the equation they were given by placing each correct answer from the answer bank into the table below.

Answer Bank

Aya   Ganat   Omnia

$125.16 + x = 312.89$	$312.89 + 312.89 = x$	$312.89 + 125.16 = x$

Concept Check-In
Unit 2 Concept 1

Name _____ **Date** _____

12. A teacher asked students to write a story that could be solved by finding the value of the variable in the equation $4.62 + n = 9.17$.

Amir wrote this story: Kareem walked 4.62 kilometers from Om El Saad before he ate his lunch. He walked 9.17 km in total for the day. How many km did he walk after lunch?

Gamal wrote this story: A restaurant owner bought 9.17 kilograms of potatoes and 4.62 kg of carrots. What is the total mass, in kg, of the vegetables he bought?

Which student, if any, wrote a story that can be solved by finding the value of n?

    A. only Amir

    B. only Gamal

    C. both Amir and Gamal

    D. neither Amir nor Gamal

Check Your Understanding
Unit 2, Concept 2

Name _____   **Date** _____

Lesson 5: Finding Factors

Instructions
Please answer each question carefully.

Solve the problems.

1. Which numbers have 2, 5, and 10 as factors?

   A. 14, 35, 60

   B. 40, 62, 45

   C. 100, 30, 80

   D. 120, 64, 70

2. Choose the numbers that are factors of the given number.

   18:      2   4   6   9   5

3. Choose the numbers that are factors of the given number.

   36:      3   9   10   12   6

Name _____   **Date** _____

Lesson 5: Finding Factors *(continued)*

4. Use this Hundreds chart to help you identify the number that has 2, 3, 4, and 5 as factors.

1	2	3	④	5	6	7	⑧	9	10
11	⑫	13	14	15	⑯	17	18	19	⑳
21	22	23	㉔	25	26	27	㉘	29	30
31	㉜	33	34	35	㊱	37	38	39	㊵
41	42	43	㊹	45	46	47	㊽	49	50
51	㊼	53	54	55	㊶	57	58	59	㊿
61	62	63	㋔	65	66	67	㊸	69	70
71	㋒	73	74	75	㋖	77	78	79	⑧⓪
81	82	83	㊸	85	86	87	⑧⑧	89	90
91	⑨②	93	94	95	⑨⑥	97	98	99	⑩⓪

_____

5. Identify the mystery numbers: They are numbers between 15 and 30. They each have 7 as a factor. What are the numbers?

  A. 21, 27

  B. 28, 21

  C. 17, 28

  D. 12, 28

Check Your Understanding
Unit 2, Concept 2

Name _____ **Date** _____

Lesson 6: Prime Factorization

Instructions

Please answer each question carefully.

Solve the problems.

1. What is the missing product for this factor tree?

_____
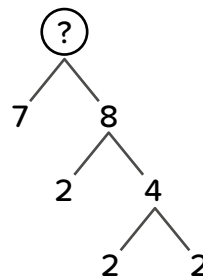
2. Which expression shows the prime factorization for this factor tree?
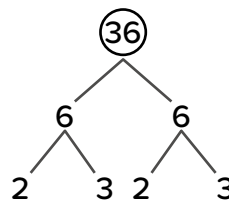
    A. 2 x 2 x 3 x 3

    B. 6 x 6

    C. 2 x 3 x 2 x 6 x 6 x 3

    D. 36 x 6 x 6 x 2 x 3 x 2 x 3

Name _____   **Date** _____

Lesson 6: Prime Factorization *(continued)*

3. Complete this factor tree. The circles are prime factors. The square is a composite factor.
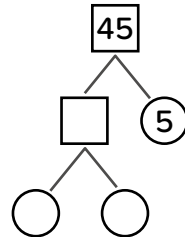
4. Nawal was going to hike Mt. Sinai with her family. She baked 30 cookies to share. She was not sure how to divide the cookies equally, so she made a factor tree for 30 to see all of her options.
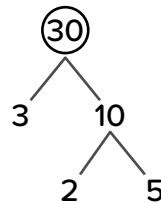
Which of the following would be all of the ways she could separate the cookies? In groups of:

- **A.** 2, 4, or 5
- **B.** 2, 3, 5, or 10
- **C.** 2, 3, 5, 6, 10, or 40
- **D.** 2, 3, 5, 6, or 10

5. Rami listed the following prime factors for the number 40: 2 x 2 x 2 x 5 = 40. Is Rami correct? Fill in the factor tree to see if he is correct. (Remember the squares are composite factors.)
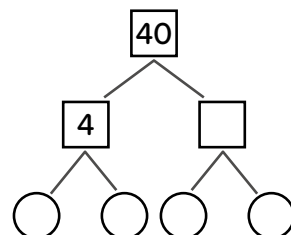
Check Your Understanding
Unit 2, Concept 2

Name _____ **Date** _____

Lesson 7: Greatest Common Factors

Instructions
Please answer each question carefully.

Solve the problems.

1. What are the common factors of 56 and 48?

    _____

2. Beaded necklaces are very common souvenirs in Sharm El Sheikh. You
    have 56 coral beads and 48 turquoise beads. If you want to put all the
    beads into bags with an equal number of each type of bead in each bag,
    what is the largest number of bags you can make?

    _____

3. Since the prime factorization of 72 is 2 x 2 x 2 x 3 x 3, what composite
    numbers are also factors of 72? Select *one* correct answer. Not all factors
    are listed.

    A. 4, 9, 15

    B. 4, 8, 20

    C. 6, 8, 9, 18

    D. 6, 8, 12, 32

4. The Primary 5 class is going on a trip to the beach. There are 24 girls and
    32 boys in the class. Students will be divided into groups of girls and boys.
    What is the greatest number of groups that can be made so that each
    group has the same number of children? How many children will be in
    each group of boys? How many children will be in each group of girls?

    _____

    _____

    _____

Check Your Understanding
Unit 2, Concept 2

Name _____ **Date** _____

Lesson 8: Identifying Multiples

Instructions
Please answer each question carefully.

Solve the problems.

1. Find a common multiple of 9 and 5.

_____

2. Select the common multiples of 5, 8, and 10. Choose *two* correct answers.

    A. 10

    B. 40

    C. 80

    D. 650

3. 15, 75, and 155 are all multiples of what number? Explain how you know.

_____

_____

4. Which of the following are multiples of 6 and 12? Choose *three* correct answers.

    A. 6

    B. 12

    C. 24

    D. 60

    E. 66

5. 27, 36, 45, and 54 are all multiples of what number?

_____

Check Your Understanding
Unit 2, Concept 2

Name _____   **Date** _____

Lesson 9: Least Common Multiple

Instructions

Please answer each question carefully.

Solve the problems.

1. Find the LCM of 10 and 4.

   _____

2. Find the LCM of 4 and 9.

   _____

3. Find the LCM of 9 and 3.

   _____

4. Find the LCM of 6, 5, and 10.

   _____

5. Forks come in packs of 6 and knives come in packs of 8. If you buy the minimum needed to get the same number of forks and knives, how many utensils will you have in all?

   _____

Check Your Understanding
Unit 2, Concept 2

Name _____   **Date** _____

Lesson 10: Factors or Multiples?

Instructions

Please answer each question carefully.

Find the Greatest Common Factor (GCF) and Least Common Multiple (LCM) of the number pairs. Then, solve the story problems.

1. 11 and 9

   GCF: _____

   LCM: _____

2. 10 and 2

   GCF: _____

   LCM: _____

3. 5 and 9

   GCF: _____

   LCM: _____

4. To prepare for a party, Saad is putting desserts onto platters. The basbousa is cut into 15 pieces and the aish el saraya is cut into 6 pieces. If he wants to prepare identical platters without having any desserts left over, what is the greatest number of platters he can prepare?

   _____

5. Naglaa eats an apple every 12 days and an orange every 9 days. If she eats both fruits today, how many days will it be until she eats both fruits on the same day again?

   _____

Concept Check-In
Unit 2 Concept 2

Name _____   **Date** _____

Concept 2: Factors and Multiples

Instructions
Please answer each question carefully.

1. Which is the *best* definition of a factor?

    A. the result of multiplying two or more numbers

    B. the result of adding two or more whole numbers together

    C. a number that can divide evenly into a larger number

    D. a number that that can be divided evenly by a given number

2. Hala created a factor rainbow for 45. Which two factors are missing from her work?

45

1   3   15   45
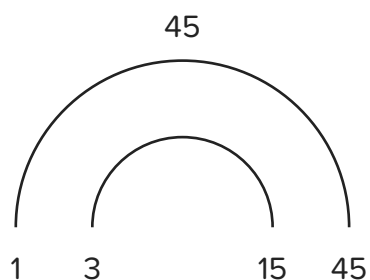
    A. 2 and 23

    B. 5 and 9

    C. 6 and 7

    D. 20 and 25

Name _____   **Date** _____

3. Which factor trees correctly show the complete prime factorization of 72?
Choose *two* answers.

A. 72
      / \
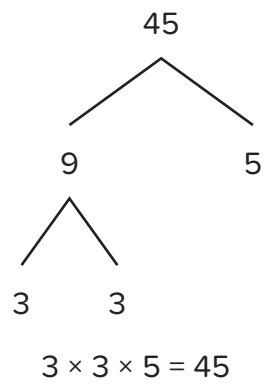   3   36
          / \
         2   18
              / \
             3   9
                 / \
                3   3

C. 72
      /   \
     4   18
    / \   / \
   2   2 3   9
              / \
             3   3

E. 72
      /   \
     8   9
    / \   / \
   2   4 3   3
      / \
     2   2

B. 72
      / \
     3   24
          / \
         3   8
             / \
            2   4
                / \
               2   2
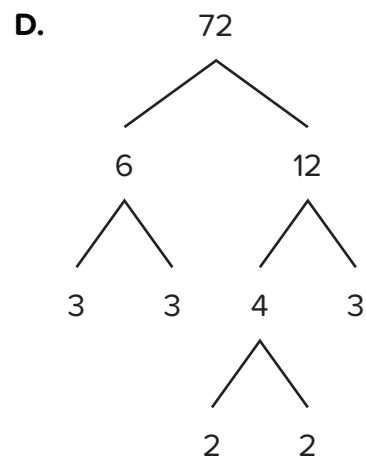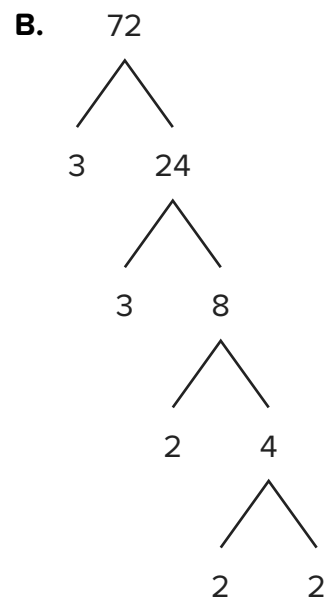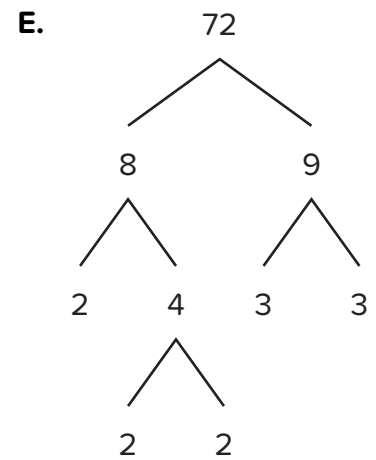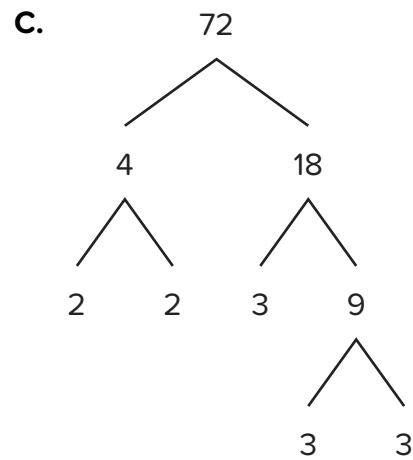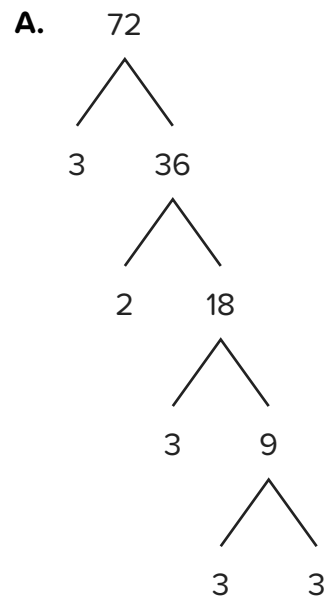
D. 72
      /   \
     6   12
    / \   / \
   3   3 4   3
              / \
             2   2

Name _____   **Date** _____

4. Consider the given factor trees for 45 and 60.

45

9   5

3   3

$3 × 3 × 5 = 45$

60

6   10

2   3   2   5

$2 × 3 × 2 × 5 = 60$
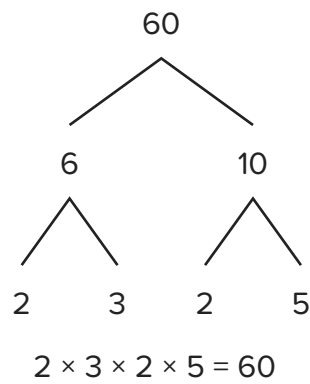
Based on the factor trees, make the following sentences true:

The number 12 _____ a common factor of 45 and 60.

is
is not

The number 15 _____ a common factor of 45 and 60.

is
is not

The number 18 _____ a common factor of 45 and 60.

is
is not

Concept Check-In
Unit 2 Concept 2

Name _____   **Date** _____

5. Consider the given factor trees for 16 and 27.
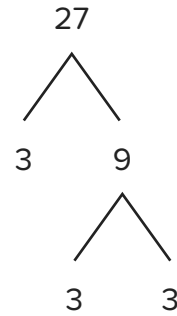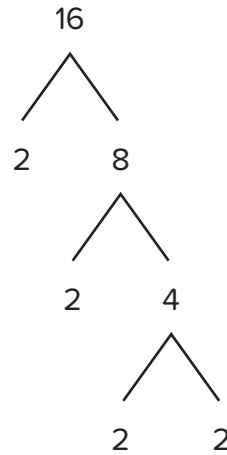
What is the greatest common factor of 16 and 27?

_____

6. Consider the given factor trees for 60 and 90.
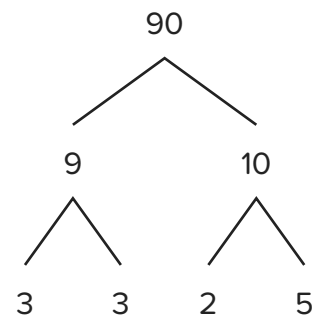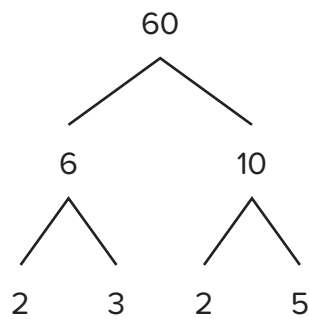
What is the greatest common factor of 60 and 90?

    A. 5

    B. 10

    C. 25

    D. 30

Concept Check-In
Unit 2 Concept 2

Name _____ **Date** _____

7. Taher bought figs at the market. If the figs come in packages of 8, which phrase describes the total number of figs he bought?

    A. a factor of 8

    B. an addend of 8

    C. a multiple of 8

    D. a quotient of 8

8. Which *two* numbers are multiples of 8 and 12?

    A. 1

    B. 4

    C. 20

    D. 72

    E. 96

Concept Check-In
Unit 2 Concept 2

Name _____   **Date** _____

9. The Venn diagram shown will be completed to show multiples of 7 and 8.

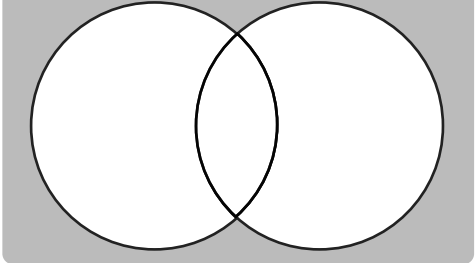**Multiples of 7**   **Multiples of 8**
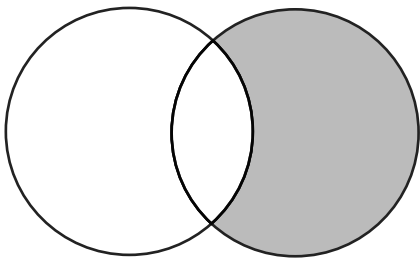
In which image does the shaded region show where in the Venn diagram the least common multiple of 7 and 8 can be found?
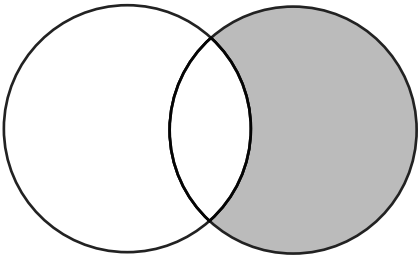
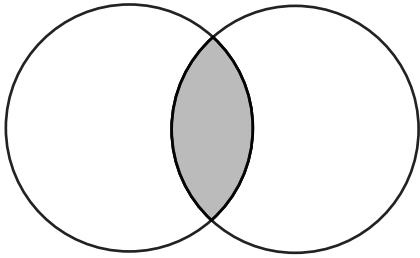**A.** Multiples of 7   Multiples of 8
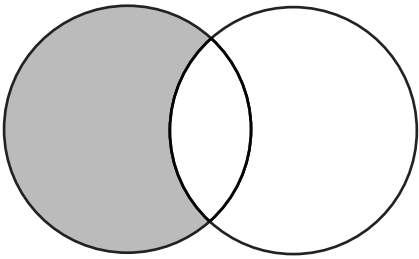
C. Multiples of 7   Multiples of 8

B. Multiples of 7   Multiples of 8

D. Multiples of 7   Multiples of 8

10. What is the least common multiple of 8 and 10?

_____

Concept Check-In
Unit 2 Concept 2

Name _____ **Date** _____

11. Match each scenario with the name of the value needed to solve the problem by placing each correct answer from the answer bank into the table below.

> **Answer Bank**
>
> greatest common factor (GCF)   least common multiple (LCM)

Basma has a garden that is 8 meters wide. Farha has a garden that is 12 m wide. Both girls want to divide their gardens into sections that have the same width and are as wide as possible.	
Hala walks in the park every 4 days, and Dalia walks in the park every 5 days. They both walked in the park today and want to know how many days from today will be the next time that they both walk in the park on the same day.	
Ehab is buying coffee cups and plates for his cafe. The coffee cups come in boxes of 8, and the plates come in boxes of 10. He wants to have the same number of cups and plates, but he wants to buy the fewest boxes possible.	
Kamal has 6 pieces of baklava and 9 pieces of basbousa. He wants to give the same number of pieces of each dessert to as many friends as possible without having any pieces left over.	

Name _____   **Date** _____

12. Select the correct answers to complete the sentence.

The greatest common factor of 9 and 12 is _____,

3
6
9
36

and the least common multiple of 9 and 12 is _____.

3
21
36
108